

1/26/04

Attorney Docket No. 1907.04-1

1-19

WHAT IS CLAIMED IS:

1. A method for inhibiting HIV viral budding from a host cell, comprising reducing the concentration of a protein complex in the cell, said protein complex having a first protein which is Tsg101 interacting with a second protein which is HIV GAG.

5

2. The method of Claim 1, wherein said reducing step comprising interfering with an interaction between said first protein and said second protein.

3. The method of Claim 2, wherein said reducing step comprises  
10 administering to the cell a compound capable of interfering with an interaction between said first protein and said second protein.

4. The method of Claim 3, wherein said compound is capable of binding  
Tsg101.

15

5. The method of Claim 3, wherein said compound is capable of binding the UEV domain of Tsg101 protein.

6. The method of Claim 5, wherein said compound is an antibody  
20 immunoreactive with Tsg101.

7. The method of Claim 5, wherein said compound is a nucleic acid encoding  
an antibody immunoreactive with Tsg101.

25

8. The method of Claim 7, wherein said antibody is a single-chain antibody.

9. The method of Claim 5, wherein said compound is a peptide having a  
GAG PRAG contiguous span of from 7 to 50 amino acid residues of HIV GAG, said contiguous span  
encompassing the late domain motif.

30

I. MIRTH INH USING  $\alpha$ -Tsg101 Ab (1-8)

424/1  
435/5; 130.1, 154.1

II. " " " GAG PRAG (1-5,9) 111

435/5; 424/202.1  
~~435/5~~

III. " " " siRNA Tsg101 (1,10-15) 1072

435/5; 536/24.5

IV. RNP UReP w/ siRNA Tsg101 (16,17)

435/325; 536/24.5

V. RNP w/ w/ Gag siRNA (18,19)

435/325; .. ..

10. The method of Claim 1, wherein said reducing step comprises reducing the concentration of Tsg101 in the cell.

11. The method of Claim 10, wherein said step of reducing the concentration 5 of Tsg101 in the cell comprises administering to the cell a nucleic acid molecule that induce the degradation of RNA transcripts encoding Tsg101.

12. The method of Claim 11, wherein said nucleic acid molecule is an antisense compound specifically hybridizing to a Tsg101 nucleic acid.

10

13. The method of Claim 11, wherein said nucleic acid molecule is a ribozyme compound specifically hybridizing to a Tsg101 nucleic acid.

14.

14. The method of Claim 11, wherein said nucleic acid molecule is an siRNA or 15 an expression vector expressing an shRNA.

15. The method of Claim 13, wherein said expression vector comprises a promoter operably linked to an shRNA-encoding nucleic acid.

20

16. An expression vector comprising a promoter operably linked to a nucleic acid encoding an shRNA capable of inducing degradation of Tsg101 transcript.

25

17. A host cell comprising the expression vector of Claim 16.

18. An expression vector comprising a promoter operably linked to a nucleic acid encoding an shRNA capable of hybridizing to a region of an HIV transcript encoding the GAG polypeptide, said region encoding HIV GAGp6.

19. A host cell comprising the expression vector of Claim 18.